

# Exhibit(s) 18.1

## Tabulation of Proposed Allocation Study

Bible Broadcasting Network, Inc. CH# 220C3 - 91.9 MHz, Pwr= 25 kw DA, HAAT= 97.4 M, COR= 138 M Average Protected F(50-50)= 38.64 km Standard Directional											
REFERENCE										DISPLAY DATES	
27 56 35.0 N.										DATA 12-12-13	
81 54 45.0 W.										SEARCH 12-12-13	
CH	CALL	TYPE	ANT	AZI	DIST	LAT	PWR(kw)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	(Overlap	in km)
220C3	WYFO	LIC DEN		0.0	0.00	27 56 35.0	25.000	90.5	29.9	-124.7*	-130.4*
Lakeland		FL		0.0	BLED19900604KA	81 54 45.0	100	139	Bible Broadcasting Network		
220A	WTIR	CP _CX		137.3	127.69	27 05 46.0	2.800	53.8	13.5	34.6	0.3
Brighton Reservatio		FL		317.7	BMPED20131022AEN	81 02 16.0	32	40	Seminole Tribe Of Florida		
220C3	WSCF-FM	LIC DCN		103.2	146.27	27 38 10.0	15.500	95.0	30.9	11.5	1.0
Vero Beach		FL		283.8	BMLD19971002KB	80 27 59.0	93	98	Central Educational Broadc		
219A	WJFH	LIC DCX		146.3	75.00	27 22 52.0	2.000	20.8	13.8	15.3	1.2
Sebring		FL		326.5	BLED20131121AVS	81 29 28.0	137	166	Radio Training Network, In		
220C2	WHGN	LIC DEX		330.0	115.51	28 50 29.0	41.000	85.2	29.2	3.7	1.3
Crystal River		FL		149.7	BLED20020207AAS	82 30 21.0	165	165	The Moody Bible Institute		
221C3	WLTQ-FM«	LIC _CX		211.8	103.32	27 09 03.0	11.500	57.6	38.5	99.0R	4.8M
Venice		FL		31.6	BLH20040406ACI	82 27 51.0	145	147	Citicasters Licenses, Inc.		
220A	WMYE	LIC ZCX		174.9	129.21	26 47 07.5	1.200	43.2	12.6	49.7	5.7
Fort Myers		FL		354.9	BLED20080625ACD	81 47 46.6	100	108	Call Communications Group,		
220A	WTIR	LIC _CX		137.3	127.69	27 05 46.0	0.250	23.8	7.1	64.6	6.7
Brighton Reservatio		FL		317.7	BLED20130711AAS	81 02 16.0	16	25	Seminole Tribe Of Florida		
222C	WWKA«	LIC _C_		50.2	109.06	28 34 07.0	100.000	12.1	83.1	96.0R	13.6M
Orlando		FL		230.6	BLH20011221AAP	81 03 16.0	454	463	Cox Radio, Inc.		
218C0	WCIE	LIC DCX		287.8	88.07	28 10 56.0	75.000	8.7	69.2	40.5	14.9
New Port Richey		FL		107.4	BLED20131121AVZ	82 46 05.9	389	391	Radio Training Network, In		
223C2	WYUU«	LIC _C_		263.0	89.50	27 50 32.0	50.000	5.9	52.1	56.0R	34.0M
Safety Harbor		FL		82.6	BLH19990720KH	82 48 52.0	149	151	Cbs Radio Stations Inc.		
219A	WVIJ	LIC _CX		188.2	108.12	26 58 49.0	1.900	24.7	16.7	47.2	34.4
Port Charlotte		FL		8.1	BLED20070625ADU	82 04 03.0	63	67	Port Charlotte Educational		
273C	WHPT«	LIC _CX		209.3	67.96	27 24 30.0	100.000	3.2	31.4	31.0R	37.5M
Sarasota		FL		29.1	BMLH20100212AAW	82 15 00.0	503	520	Cox Radio, Inc.		
218A	WPRK	LIC _CX		37.3	90.76	28 35 28.0	1.300	1.6	10.8	49.7	75.8
Winter Park		FL		217.6	BLED20120323AFU	81 20 55.7	32	54	Rollins College		
218A	WGTT	LIC _CX		6.0	112.82	28 57 08.0	1.100	1.6	11.9	74.6	97.2
Emeralda		FL		186.1	BLED20110606ABL	81 47 29.0	41	62	Bible Clarity		
218C3	WMIE-FM	LIC DEN		67.9	123.18	28 21 21.0	20.000	2.2	21.4	81.4	97.7
Cocoa		FL		248.4	BLED19840921CT	80 44 47.0	30	52	National Christian Network		
219C3	WDOZ	LIC DEX		12.2	170.32	29 26 23.0	5.000	44.0	28.6	87.8	82.5
Pierson		FL		192.4	BLED20130329AIE	81 32 23.0	114	120	Central Florida Educationa		

Terrain database is USGS 03 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM  
 Contour distances are on direct line to and from reference station. Reference zone= - Zone 2, Co to 3rd adjacent.  
 All separation margins (if shown) include rounding  
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)  
 "\*"affixed to 'IN' or 'OUT' values = site inside protected contour.  
 « = Station meets FCC minimum distance spacing for its class.  
 < = Contour Overlap

Green Text denotes the WYFO(FM) - Lakeland, FL facility to be modified by this proposal. This facility need not be protected.

Yellow Highlighted Text denotes Contour Protection Studies toward select stations as included in **Exhibit(s) 18.2 to 18.5.**

Exhibit(s) 18.2

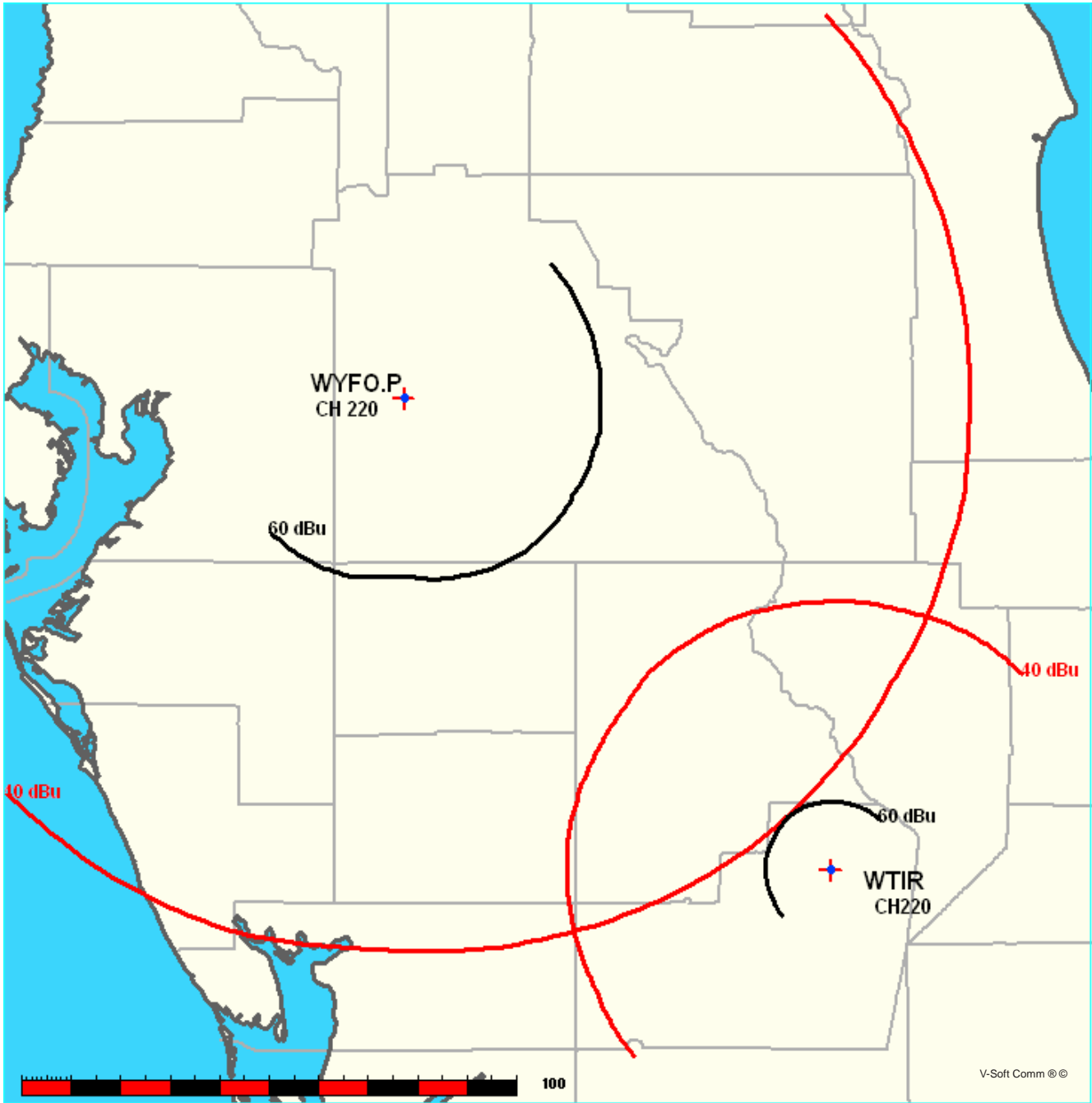
Contour Protection Studies Toward WTIR(FM) - Brighton Reservation, FL

Bible Broadcasting Network, Inc.

FMCommander Single Allocation Study - 12-13-2013 - USGS 03 SEC  
WYFO.P's Overlaps (In= 34.55 km, Out= 0.29 km)

WYFO.P CH 220 C3 DA  
Lat= 27 56 35.0, Lng= 81 54 45.0  
25.0 kW 97.4 M HAAT, 138 M COR  
Prot.= 60 dBu, Intef.= 40 dBu

WTIR-C CH 220 A BMPED20131022AEN  
Lat= 27 05 46.0, Lng= 81 02 16.0  
2.8 kW 32 M HAAT, 40 M COR  
Prot.= 60 dBu, Intef.= 40 dBu



## Exhibit(s) 18.2

### Contour Protection Studies Toward WTIR(FM) - Brighton Reservation, FL

12-13-2013

Terrain Data: USGS 03 SEC

FMOver Analysis

WYFO.P

WTIR BMPED20131022AEN

Channel = 220C3  
Max ERP = 25 kW  
RCAMSL = 138 M  
N. Lat. 27 56 35.0  
W. Lng. 81 54 45.0  
Protected  
60 dBu

Channel = 220A  
Max ERP = 2.8 kW  
RCAMSL = 40 M  
N. Lat. 27 05 46.0  
W. Lng. 81 02 16.0  
Interfering  
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
094.0	025.0000	0102.7	039.5	333.0	002.8000	0032.4	102.6	30.06	
095.0	025.0000	0103.2	039.6	332.9	002.8000	0032.4	102.0	30.18	
096.0	025.0000	0103.8	039.7	332.7	002.8000	0032.4	101.3	30.30	
097.0	025.0000	0104.3	039.8	332.5	002.8000	0032.4	100.7	30.43	
098.0	025.0000	0104.9	039.9	332.3	002.8000	0032.4	100.1	30.55	
099.0	025.0000	0105.6	040.0	332.1	002.8000	0032.4	099.5	30.68	
100.0	025.0000	0105.7	040.0	331.9	002.8000	0032.4	098.9	30.79	
101.0	025.0000	0105.5	040.0	331.6	002.8000	0032.4	098.4	30.89	
102.0	025.0000	0104.9	039.9	331.3	002.8000	0032.4	097.9	30.98	
103.0	025.0000	0104.2	039.8	331.0	002.8000	0032.4	097.5	31.07	
104.0	025.0000	0103.7	039.7	330.7	002.8000	0032.4	097.0	31.16	
105.0	025.0000	0103.4	039.6	330.4	002.8000	0032.4	096.5	31.26	
106.0	025.0000	0103.3	039.6	330.1	002.8000	0032.4	096.1	31.35	
107.0	025.0000	0103.3	039.6	329.8	002.8000	0032.4	095.6	31.45	
108.0	025.0000	0103.4	039.6	329.5	002.8000	0032.4	095.1	31.54	
109.0	025.0000	0103.5	039.6	329.2	002.8000	0032.4	094.7	31.64	
110.0	025.0000	0103.6	039.7	328.9	002.8000	0032.3	094.2	31.73	
111.0	025.0000	0103.7	039.7	328.5	002.8000	0032.3	093.8	31.82	
112.0	025.0000	0103.7	039.7	328.2	002.8000	0032.3	093.4	31.90	
113.0	025.0000	0103.6	039.7	327.8	002.8000	0032.3	093.0	31.98	
114.0	025.0000	0103.4	039.6	327.5	002.8000	0032.3	092.6	32.06	
115.0	025.0000	0103.3	039.6	327.1	002.8000	0032.4	092.3	32.13	
116.0	025.0000	0102.8	039.5	326.7	002.8000	0032.4	092.0	32.19	
117.0	025.0000	0102.2	039.4	326.3	002.8000	0032.4	091.7	32.25	
118.0	025.0000	0101.3	039.3	325.9	002.8000	0032.4	091.5	32.29	
119.0	025.0000	0100.6	039.2	325.5	002.8000	0032.4	091.3	32.33	
120.0	025.0000	0100.5	039.2	325.1	002.8000	0032.4	091.0	32.39	
121.0	025.0000	0100.9	039.2	324.7	002.8000	0032.4	090.7	32.46	
122.0	025.0000	0101.6	039.3	324.3	002.8000	0032.4	090.4	32.53	
123.0	025.0000	0102.0	039.4	323.9	002.8000	0032.4	090.0	32.60	
124.0	025.0000	0102.3	039.5	323.5	002.8000	0032.4	089.8	32.66	
125.0	025.0000	0102.6	039.5	323.1	002.8000	0032.5	089.5	32.72	
126.0	025.0000	0102.6	039.5	322.7	002.8000	0032.5	089.3	32.76	
127.0	025.0000	0102.5	039.5	322.3	002.8000	0032.5	089.1	32.80	

## Exhibit(s) 18.2

### Contour Protection Studies Toward WTIR(FM) - Brighton Reservation, FL

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
128.0	025.0000	0102.4	039.5	321.8	002.8000	0032.5	089.0	32.83
129.0	025.0000	0102.2	039.4	321.4	002.8000	0032.6	088.8	32.86
130.0	025.0000	0101.9	039.4	321.0	002.8000	0032.6	088.8	32.88
131.0	025.0000	0101.6	039.3	320.5	002.8000	0032.6	088.7	32.89
132.0	025.0000	0101.5	039.3	320.1	002.8000	0032.6	088.6	32.91
133.0	025.0000	0101.4	039.3	319.6	002.8000	0032.7	088.5	32.93
134.0	025.0000	0101.5	039.3	319.2	002.8000	0032.7	088.5	32.95
135.0	025.0000	0101.6	039.3	318.7	002.8000	0032.7	088.4	32.96
136.0	025.0000	0101.6	039.3	318.3	002.8000	0032.6	088.4	32.96
137.0	025.0000	0101.7	039.4	317.9	002.8000	0032.6	088.3	32.97
138.0	025.0000	0101.6	039.4	317.4	002.8000	0032.6	088.3	32.96
139.0	025.0000	0101.5	039.3	317.0	002.8000	0032.5	088.4	32.95
140.0	025.0000	0101.3	039.3	316.5	002.8000	0032.4	088.5	32.93
141.0	025.0000	0101.0	039.2	316.1	002.8000	0032.4	088.6	32.91
142.0	025.0000	0100.6	039.2	315.6	002.8000	0032.3	088.7	32.87
143.0	025.0000	0100.2	039.1	315.2	002.8000	0032.2	088.9	32.84
144.0	025.0000	0099.8	039.0	314.8	002.8000	0032.1	089.0	32.80
145.0	025.0000	0099.5	039.0	314.4	002.8000	0032.1	089.2	32.76
146.0	025.0000	0099.0	038.9	313.9	002.8000	0032.0	089.4	32.71
147.0	025.0000	0098.6	038.8	313.5	002.8000	0032.0	089.6	32.66
148.0	025.0000	0098.2	038.8	313.1	002.8000	0031.9	089.9	32.61
149.0	025.0000	0097.9	038.7	312.7	002.8000	0031.9	090.1	32.56
150.0	025.0000	0097.5	038.7	312.3	002.8000	0031.9	090.4	32.50
151.0	025.0000	0097.1	038.6	311.9	002.8000	0031.8	090.6	32.44
152.0	025.0000	0096.8	038.5	311.5	002.8000	0031.8	090.9	32.38
153.0	025.0000	0096.3	038.4	311.2	002.8000	0031.8	091.3	32.31
154.0	025.0000	0095.7	038.4	310.8	002.8000	0031.7	091.6	32.23
155.0	025.0000	0095.0	038.2	310.5	002.8000	0031.5	092.0	32.15
156.0	025.0000	0094.2	038.1	310.1	002.8000	0031.4	092.4	32.05
157.0	025.0000	0093.7	038.0	309.8	002.8000	0031.4	092.8	31.98
158.0	025.0000	0093.3	037.9	309.4	002.8000	0031.4	093.2	31.90
159.0	025.0000	0092.8	037.8	309.1	002.8000	0031.3	093.6	31.81
160.0	025.0000	0092.2	037.7	308.8	002.8000	0031.3	094.0	31.72
161.0	025.0000	0091.5	037.6	308.5	002.8000	0031.3	094.5	31.63
162.0	025.0000	0091.0	037.5	308.2	002.8000	0031.3	094.9	31.54
163.0	025.0000	0090.5	037.4	307.9	002.8000	0031.3	095.4	31.45
164.0	025.0000	0090.2	037.4	307.6	002.8000	0031.3	095.8	31.36
165.0	025.0000	0089.8	037.3	307.3	002.8000	0031.3	096.2	31.27
166.0	025.0000	0089.5	037.2	307.1	002.8000	0031.3	096.7	31.18
167.0	025.0000	0089.1	037.2	306.8	002.8000	0031.3	097.2	31.09
168.0	025.0000	0088.6	037.1	306.5	002.8000	0031.3	097.7	30.99
169.0	025.0000	0088.4	037.0	306.3	002.8000	0031.3	098.1	30.89
170.0	025.0000	0087.9	036.9	306.0	002.8000	0031.3	098.6	30.79
171.0	025.0000	0087.3	036.8	305.8	002.8000	0031.3	099.2	30.68
172.0	025.0000	0086.7	036.7	305.6	002.8000	0031.3	099.7	30.58
173.0	025.0000	0086.0	036.6	305.4	002.8000	0031.3	100.3	30.47

## Exhibit(s) 18.2

### Contour Protection Studies Toward WTIR(FM) - Brighton Reservation, FL

12-13-2013

Terrain Data: USGS 03 SEC

FMOver Analysis

WTIR BMPED20131022AEN

WYFO.P

Channel = 220A

Max ERP = 2.8 kW

RCAMSL = 40 M

N. Lat. 27 05 46.0

W. Lng. 81 02 16.0

Protected

60 dBu

Channel = 220C3

Max ERP = 25 kW

RCAMSL = 138 M

N. Lat. 27 56 35.0

W. Lng. 81 54 45.0

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
273.0	002.8000	0032.1	013.4	141.9	025.0000	0100.6	118.6	39.15	
274.0	002.8000	0032.2	013.4	141.8	025.0000	0100.7	118.4	39.19	
275.0	002.8000	0032.3	013.4	141.7	025.0000	0100.7	118.2	39.22	
276.0	002.8000	0032.4	013.4	141.7	025.0000	0100.7	118.0	39.25	
277.0	002.8000	0032.4	013.4	141.6	025.0000	0100.8	117.8	39.28	
278.0	002.8000	0032.4	013.4	141.5	025.0000	0100.8	117.7	39.31	
279.0	002.8000	0032.4	013.4	141.4	025.0000	0100.8	117.5	39.34	
280.0	002.8000	0032.3	013.4	141.3	025.0000	0100.9	117.4	39.37	
281.0	002.8000	0032.2	013.4	141.2	025.0000	0100.9	117.2	39.39	
282.0	002.8000	0032.1	013.4	141.1	025.0000	0100.9	117.1	39.42	
283.0	002.8000	0032.0	013.4	141.0	025.0000	0101.0	117.0	39.44	
284.0	002.8000	0031.9	013.3	140.9	025.0000	0101.0	116.8	39.46	
285.0	002.8000	0031.8	013.3	140.8	025.0000	0101.0	116.7	39.49	
286.0	002.8000	0031.8	013.3	140.8	025.0000	0101.1	116.6	39.51	
287.0	002.8000	0031.8	013.3	140.7	025.0000	0101.1	116.4	39.54	
288.0	002.8000	0031.7	013.3	140.6	025.0000	0101.1	116.3	39.56	
289.0	002.8000	0031.7	013.3	140.5	025.0000	0101.1	116.2	39.58	
290.0	002.8000	0031.6	013.3	140.4	025.0000	0101.2	116.1	39.60	
291.0	002.8000	0031.5	013.3	140.3	025.0000	0101.2	116.0	39.62	
292.0	002.8000	0031.4	013.3	140.2	025.0000	0101.2	115.9	39.64	
293.0	002.8000	0031.4	013.3	140.1	025.0000	0101.3	115.8	39.66	
294.0	002.8000	0031.4	013.2	139.9	025.0000	0101.3	115.7	39.67	
295.0	002.8000	0031.3	013.2	139.8	025.0000	0101.3	115.6	39.69	
296.0	002.8000	0031.3	013.2	139.7	025.0000	0101.3	115.5	39.71	
297.0	002.8000	0031.3	013.2	139.6	025.0000	0101.3	115.4	39.73	
298.0	002.8000	0031.3	013.2	139.5	025.0000	0101.4	115.3	39.74	
299.0	002.8000	0031.2	013.2	139.4	025.0000	0101.4	115.2	39.76	
300.0	002.8000	0031.3	013.2	139.3	025.0000	0101.4	115.2	39.77	
301.0	002.8000	0031.3	013.2	139.2	025.0000	0101.5	115.1	39.79	
302.0	002.8000	0031.3	013.2	139.1	025.0000	0101.5	115.0	39.80	
303.0	002.8000	0031.3	013.2	139.0	025.0000	0101.5	114.9	39.81	
304.0	002.8000	0031.3	013.2	138.9	025.0000	0101.6	114.9	39.83	
305.0	002.8000	0031.3	013.2	138.8	025.0000	0101.6	114.8	39.84	

**MUNN-REESE, INC.**

Broadcast Engineering Consultants

COLDWATER, MI 49036

## Exhibit(s) 18.2

### Contour Protection Studies Toward WTIR(FM) - Brighton Reservation, FL

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
306.0	002.8000	0031.3	013.2	138.7	025.0000	0101.6	114.8	39.85
307.0	002.8000	0031.3	013.2	138.5	025.0000	0101.6	114.7	39.86
308.0	002.8000	0031.3	013.2	138.4	025.0000	0101.6	114.7	39.87
309.0	002.8000	0031.3	013.2	138.3	025.0000	0101.6	114.6	39.87
310.0	002.8000	0031.4	013.3	138.2	025.0000	0101.6	114.6	39.88
311.0	002.8000	0031.7	013.3	138.1	025.0000	0101.6	114.5	39.90
312.0	002.8000	0031.8	013.3	138.0	025.0000	0101.7	114.4	39.91
313.0	002.8000	0031.9	013.3	137.9	025.0000	0101.7	114.4	39.92
314.0	002.8000	0032.0	013.4	137.7	025.0000	0101.7	114.4	39.92
315.0	002.8000	0032.2	013.4	137.6	025.0000	0101.7	114.3	39.93
316.0	002.8000	0032.4	013.4	137.5	025.0000	0101.7	114.3	39.94
317.0	002.8000	0032.5	013.5	137.4	025.0000	0101.7	114.2	39.95
318.0	002.8000	0032.6	013.5	137.3	025.0000	0101.7	114.2	39.95
319.0	002.8000	0032.7	013.5	137.2	025.0000	0101.7	114.2	39.95
320.0	002.8000	0032.6	013.5	137.0	025.0000	0101.7	114.2	39.95
321.0	002.8000	0032.6	013.5	136.9	025.0000	0101.7	114.2	39.94
322.0	002.8000	0032.5	013.4	136.8	025.0000	0101.7	114.3	39.94
323.0	002.8000	0032.5	013.4	136.7	025.0000	0101.7	114.3	39.93
324.0	002.8000	0032.4	013.4	136.6	025.0000	0101.7	114.3	39.93
325.0	002.8000	0032.4	013.4	136.5	025.0000	0101.7	114.4	39.92
326.0	002.8000	0032.4	013.4	136.3	025.0000	0101.7	114.4	39.91
327.0	002.8000	0032.4	013.4	136.2	025.0000	0101.7	114.5	39.90
328.0	002.8000	0032.3	013.4	136.1	025.0000	0101.6	114.5	39.89
329.0	002.8000	0032.3	013.4	136.0	025.0000	0101.6	114.6	39.88
330.0	002.8000	0032.4	013.4	135.9	025.0000	0101.6	114.6	39.88
331.0	002.8000	0032.4	013.4	135.8	025.0000	0101.6	114.7	39.87
332.0	002.8000	0032.4	013.4	135.7	025.0000	0101.6	114.7	39.86
333.0	002.8000	0032.4	013.4	135.5	025.0000	0101.6	114.8	39.84
334.0	002.8000	0032.5	013.4	135.4	025.0000	0101.6	114.9	39.83
335.0	002.8000	0032.5	013.4	135.3	025.0000	0101.6	114.9	39.82
336.0	002.8000	0032.5	013.5	135.2	025.0000	0101.6	115.0	39.81
337.0	002.8000	0032.6	013.5	135.1	025.0000	0101.6	115.1	39.79
338.0	002.8000	0032.6	013.5	135.0	025.0000	0101.6	115.2	39.78
339.0	002.8000	0032.6	013.5	134.9	025.0000	0101.6	115.3	39.76
340.0	002.8000	0032.5	013.5	134.8	025.0000	0101.6	115.4	39.74
341.0	002.8000	0032.4	013.4	134.7	025.0000	0101.5	115.5	39.72
342.0	002.8000	0032.3	013.4	134.6	025.0000	0101.5	115.6	39.70
343.0	002.8000	0032.3	013.4	134.5	025.0000	0101.5	115.7	39.68
344.0	002.8000	0032.2	013.4	134.4	025.0000	0101.5	115.8	39.65
345.0	002.8000	0032.1	013.4	134.3	025.0000	0101.5	116.0	39.63
346.0	002.8000	0032.0	013.4	134.2	025.0000	0101.5	116.1	39.61
347.0	002.8000	0031.9	013.3	134.1	025.0000	0101.5	116.2	39.58
348.0	002.8000	0031.9	013.3	134.0	025.0000	0101.5	116.4	39.56
349.0	002.8000	0032.0	013.4	133.9	025.0000	0101.5	116.5	39.54
350.0	002.8000	0032.0	013.4	133.8	025.0000	0101.5	116.6	39.52
351.0	002.8000	0031.9	013.3	133.7	025.0000	0101.5	116.8	39.49
352.0	002.8000	0031.9	013.3	133.6	025.0000	0101.5	116.9	39.47

## Exhibit(s) 18.3

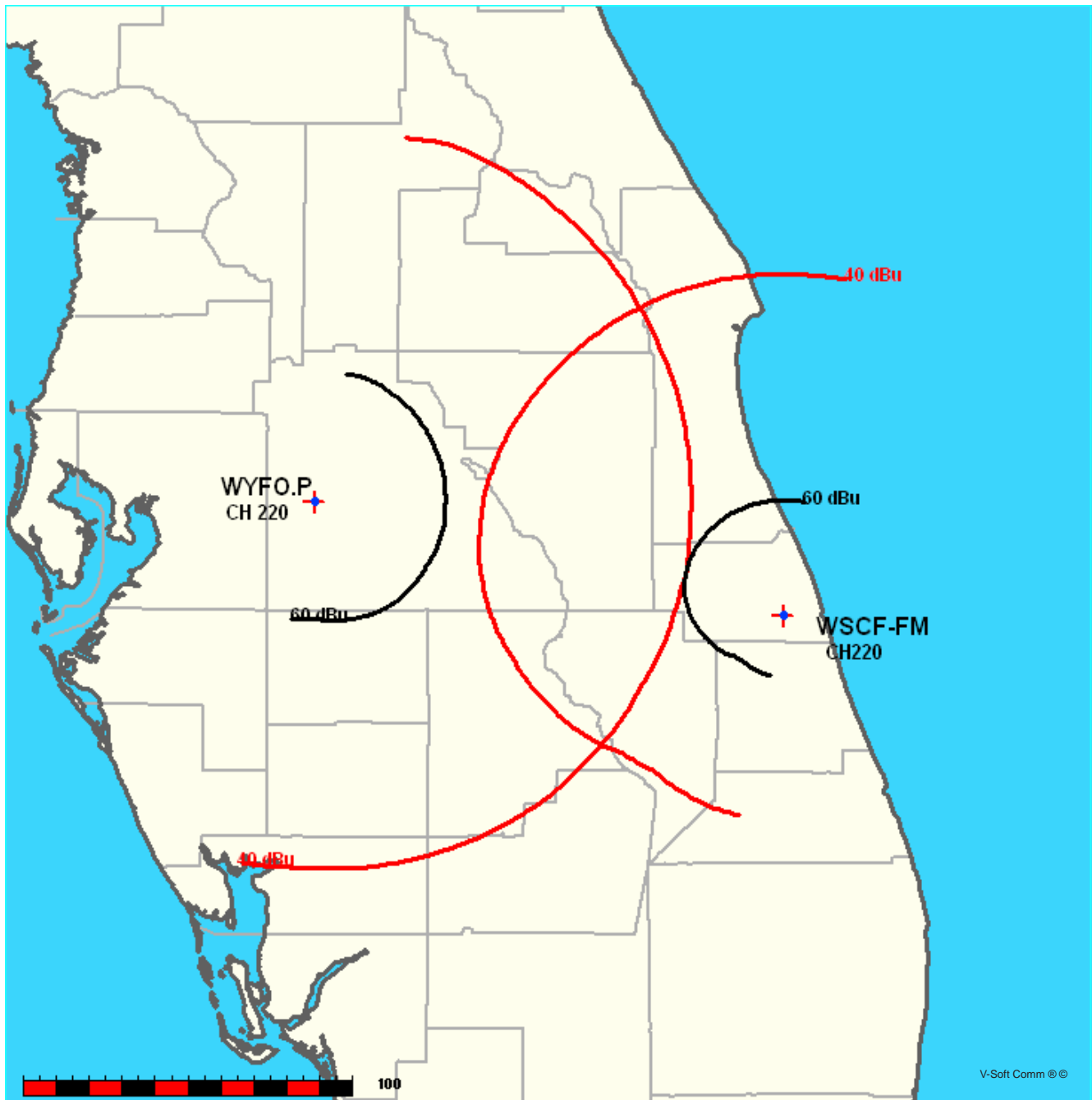
### Contour Protection Studies Toward WSCF-FM - Vero Beach, FL

Bible Broadcasting Network, Inc.

FMCommander Single Allocation Study - 12-13-2013 - USGS 03 SEC  
WYFO.P's Overlaps (In= 11.54 km, Out= 0.97 km)

WYFO.P CH 220 C3 DA  
Lat= 27 56 35.0, Lng= 81 54 45.0  
25.0 kW 97.4 M HAAT, 138 M COR  
Prot.= 60 dBu, Intef.= 40 dBu

WSCF-FM CH 220 C3 DA BMLED19971002KB  
Lat= 27 38 10.0, Lng= 80 27 59.0  
15.5 kW 93 M HAAT, 98 M COR  
Prot.= 60 dBu, Intef.= 40 dBu





# Exhibit(s) 18.3

## Contour Protection Studies Toward WSCF-FM - Vero Beach, FL

12-13-2013

Terrain Data: USGS 03 SEC

FMOver Analysis

WYFO.P

WSCF-FM BMLED19971002KB

Channel = 220C3

Max ERP = 25 kW

RCAMSL = 138 M

N. Lat. 27 56 35.0

W. Lng. 81 54 45.0

Protected

60 dBu

Channel = 220C3

Max ERP = 15.5 kW

RCAMSL = 98 M

N. Lat. 27 38 10.0

W. Lng. 80 27 59.0

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
059.0	025.0000	0103.3	039.6	297.0	013.2632	0090.9	121.0	35.66	
060.0	025.0000	0103.1	039.6	296.8	013.2359	0090.9	120.5	35.75	
061.0	025.0000	0103.1	039.6	296.6	013.2089	0090.9	119.9	35.83	
062.0	025.0000	0103.2	039.6	296.4	013.1827	0090.9	119.3	35.93	
063.0	025.0000	0103.3	039.6	296.2	013.1545	0090.9	118.8	36.01	
064.0	025.0000	0103.2	039.6	296.0	013.1246	0090.9	118.2	36.09	
065.0	025.0000	0103.1	039.6	295.8	013.0934	0090.9	117.7	36.17	
066.0	025.0000	0103.0	039.6	295.6	013.0619	0090.9	117.2	36.25	
067.0	025.0000	0103.1	039.6	295.4	013.0302	0090.8	116.7	36.33	
068.0	025.0000	0103.3	039.6	295.2	012.9992	0090.8	116.1	36.42	
069.0	025.0000	0103.4	039.6	294.9	012.9663	0090.8	115.6	36.49	
070.0	025.0000	0103.8	039.7	294.7	012.9347	0090.8	115.1	36.58	
071.0	025.0000	0104.1	039.7	294.5	012.9011	0090.7	114.6	36.65	
072.0	025.0000	0104.3	039.8	294.2	012.8660	0090.7	114.1	36.73	
073.0	025.0000	0104.2	039.8	294.0	012.8287	0090.7	113.7	36.80	
074.0	025.0000	0103.8	039.7	293.7	012.7879	0090.7	113.3	36.85	
075.0	025.0000	0103.6	039.7	293.4	012.7473	0090.6	112.9	36.91	
076.0	025.0000	0103.4	039.6	293.1	012.7067	0090.6	112.5	36.97	
077.0	025.0000	0103.4	039.6	292.8	012.6665	0090.6	112.1	37.03	
078.0	025.0000	0103.5	039.7	292.5	012.6264	0090.6	111.7	37.09	
079.0	025.0000	0103.6	039.7	292.2	012.5851	0090.6	111.3	37.15	
080.0	025.0000	0103.7	039.7	291.9	012.5436	0090.5	110.9	37.20	
081.0	025.0000	0103.9	039.7	291.6	012.5014	0090.5	110.5	37.26	
082.0	025.0000	0103.9	039.7	291.3	012.4579	0090.5	110.2	37.31	
083.0	025.0000	0103.7	039.7	291.0	012.4129	0090.5	109.9	37.35	
084.0	025.0000	0103.4	039.6	290.6	012.3665	0090.4	109.6	37.38	
085.0	025.0000	0103.2	039.6	290.3	012.3202	0090.4	109.3	37.41	
086.0	025.0000	0103.1	039.6	290.0	012.2714	0090.4	109.1	37.44	
087.0	025.0000	0103.0	039.6	289.6	012.1971	0090.4	108.8	37.47	
088.0	025.0000	0103.2	039.6	289.3	012.1235	0090.4	108.5	37.49	
089.0	025.0000	0103.1	039.6	289.0	012.0479	0090.4	108.3	37.51	
090.0	025.0000	0103.1	039.6	288.6	011.9721	0090.4	108.1	37.52	
091.0	025.0000	0102.9	039.6	288.3	011.8953	0090.4	107.9	37.53	
092.0	025.0000	0102.8	039.5	287.9	011.8180	0090.3	107.8	37.54	
093.0	025.0000	0102.8	039.5	287.5	011.7411	0090.4	107.6	37.54	



## Exhibit(s) 18.3

### Contour Protection Studies Toward WSCF-FM - Vero Beach, FL

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
094.0	025.0000	0102.7	039.5	287.2	011.6638	0090.4	107.4	37.54
095.0	025.0000	0103.2	039.6	286.8	011.5880	0090.3	107.2	37.56
096.0	025.0000	0103.8	039.7	286.5	011.5121	0090.3	107.0	37.57
097.0	025.0000	0104.3	039.8	286.1	011.4353	0090.3	106.8	37.58
098.0	025.0000	0104.9	039.9	285.8	011.3581	0090.3	106.6	37.59
099.0	025.0000	0105.6	040.0	285.4	011.2805	0090.3	106.4	37.59
100.0	025.0000	0105.7	040.0	285.0	011.2016	0090.3	106.4	37.58
101.0	025.0000	0105.5	040.0	284.6	011.1225	0090.3	106.3	37.55
102.0	025.0000	0104.9	039.9	284.3	011.0434	0090.3	106.4	37.50
103.0	025.0000	0104.2	039.8	283.9	010.9651	0090.3	106.5	37.46
104.0	025.0000	0103.7	039.7	283.5	010.8876	0090.3	106.6	37.41
105.0	025.0000	0103.4	039.6	283.1	010.8106	0090.3	106.7	37.37
106.0	025.0000	0103.3	039.6	282.8	010.7341	0090.3	106.7	37.32
107.0	025.0000	0103.3	039.6	282.4	010.6579	0090.3	106.8	37.28
108.0	025.0000	0103.4	039.6	282.0	010.5820	0090.3	106.8	37.24
109.0	025.0000	0103.5	039.6	281.7	010.5064	0090.3	106.9	37.19
110.0	025.0000	0103.6	039.7	281.3	010.4314	0090.3	107.0	37.14
111.0	025.0000	0103.7	039.7	280.9	010.3571	0090.3	107.1	37.09
112.0	025.0000	0103.7	039.7	280.6	010.2836	0090.3	107.2	37.03
113.0	025.0000	0103.6	039.7	280.2	010.2113	0090.3	107.4	36.97
114.0	025.0000	0103.4	039.6	279.9	010.1292	0090.3	107.6	36.90
115.0	025.0000	0103.3	039.6	279.5	010.0326	0090.3	107.8	36.81
116.0	025.0000	0102.8	039.5	279.2	009.9395	0090.3	108.1	36.72
117.0	025.0000	0102.2	039.4	278.8	009.8496	0090.3	108.4	36.62
118.0	025.0000	0101.3	039.3	278.5	009.7635	0090.3	108.7	36.51
119.0	025.0000	0100.6	039.2	278.2	009.6785	0090.3	109.1	36.41
120.0	025.0000	0100.5	039.2	277.9	009.5903	0090.3	109.4	36.31
121.0	025.0000	0100.9	039.2	277.5	009.4984	0090.3	109.6	36.23
122.0	025.0000	0101.6	039.3	277.2	009.4059	0090.3	109.8	36.15
123.0	025.0000	0102.0	039.4	276.8	009.3168	0090.3	110.0	36.06
124.0	025.0000	0102.3	039.5	276.5	009.2295	0090.3	110.3	35.97
125.0	025.0000	0102.6	039.5	276.2	009.1438	0090.3	110.6	35.88
126.0	025.0000	0102.6	039.5	275.9	009.0634	0090.3	110.9	35.77
127.0	025.0000	0102.5	039.5	275.6	008.9854	0090.3	111.3	35.67
128.0	025.0000	0102.4	039.5	275.3	008.9099	0090.3	111.7	35.56
129.0	025.0000	0102.2	039.4	275.0	008.8363	0090.3	112.1	35.45
130.0	025.0000	0101.9	039.4	274.7	008.7665	0090.3	112.5	35.33
131.0	025.0000	0101.6	039.3	274.5	008.6985	0090.3	113.0	35.22
132.0	025.0000	0101.5	039.3	274.2	008.6299	0090.3	113.4	35.10
133.0	025.0000	0101.4	039.3	273.9	008.5630	0090.3	113.9	34.99
134.0	025.0000	0101.5	039.3	273.7	008.4953	0090.3	114.3	34.88
135.0	025.0000	0101.6	039.3	273.4	008.4297	0090.3	114.7	34.76
136.0	025.0000	0101.6	039.3	273.2	008.3664	0090.3	115.2	34.65
137.0	025.0000	0101.7	039.4	272.9	008.3036	0090.3	115.7	34.53
138.0	025.0000	0101.6	039.4	272.7	008.2452	0090.3	116.2	34.42
139.0	025.0000	0101.5	039.3	272.4	008.1893	0090.3	116.7	34.30
140.0	025.0000	0101.3	039.3	272.2	008.1371	0090.3	117.2	34.17

# Exhibit(s) 18.3

## Contour Protection Studies Toward WSCF-FM - Vero Beach, FL

12-13-2013

Terrain Data: USGS 03 SEC

FMOver Analysis

WSCF-FM BMLED19971002KB

WYFO.P

Channel = 220C3

Max ERP = 15.5 kW

RCAMSL = 98 M

N. Lat. 27 38 10.0

W. Lng. 80 27 59.0

Protected

60 dBu

Channel = 220C3

Max ERP = 25 kW

RCAMSL = 138 M

N. Lat. 27 56 35.0

W. Lng. 81 54 45.0

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
239.0	002.3818	0089.8	021.8	109.9	025.0000	0103.6	131.7	36.88	
240.0	002.4800	0089.8	022.0	109.8	025.0000	0103.6	131.3	36.97	
241.0	002.5802	0089.8	022.2	109.8	025.0000	0103.6	130.9	37.05	
242.0	002.6824	0089.8	022.4	109.7	025.0000	0103.6	130.4	37.13	
243.0	002.7865	0089.8	022.6	109.7	025.0000	0103.6	130.0	37.21	
244.0	002.8927	0089.9	022.8	109.6	025.0000	0103.6	129.6	37.29	
245.0	003.0008	0089.9	023.0	109.6	025.0000	0103.6	129.2	37.37	
246.0	003.1109	0089.9	023.2	109.5	025.0000	0103.5	128.7	37.45	
247.0	003.2230	0089.9	023.4	109.4	025.0000	0103.5	128.3	37.53	
248.0	003.3371	0090.0	023.6	109.4	025.0000	0103.5	127.9	37.60	
249.0	003.4532	0090.0	023.8	109.3	025.0000	0103.5	127.5	37.68	
250.0	003.5712	0090.0	024.0	109.2	025.0000	0103.5	127.1	37.75	
251.0	003.7215	0090.0	024.2	109.1	025.0000	0103.5	126.6	37.83	
252.0	003.8750	0090.1	024.4	109.0	025.0000	0103.5	126.2	37.91	
253.0	004.0315	0090.1	024.6	108.9	025.0000	0103.5	125.8	37.99	
254.0	004.1912	0090.1	024.9	108.8	025.0000	0103.5	125.3	38.07	
255.0	004.3539	0090.2	025.1	108.7	025.0000	0103.5	124.9	38.14	
256.0	004.5198	0090.2	025.3	108.6	025.0000	0103.4	124.5	38.22	
257.0	004.6888	0090.2	025.5	108.5	025.0000	0103.4	124.0	38.29	
258.0	004.8608	0090.2	025.7	108.4	025.0000	0103.4	123.6	38.36	
259.0	005.0359	0090.2	025.9	108.2	025.0000	0103.4	123.2	38.43	
260.0	005.2142	0090.2	026.1	108.1	025.0000	0103.4	122.8	38.50	
261.0	005.4322	0090.3	026.4	107.9	025.0000	0103.4	122.4	38.57	
262.0	005.6546	0090.2	026.6	107.8	025.0000	0103.4	122.0	38.65	
263.0	005.8816	0090.3	026.8	107.7	025.0000	0103.4	121.6	38.72	
264.0	006.1130	0090.3	027.1	107.5	025.0000	0103.3	121.2	38.79	
265.0	006.3488	0090.2	027.3	107.3	025.0000	0103.3	120.8	38.86	
266.0	006.5891	0090.2	027.5	107.2	025.0000	0103.3	120.4	38.92	
267.0	006.8339	0090.2	027.8	107.0	025.0000	0103.3	120.0	38.99	
268.0	007.0831	0090.2	028.0	106.8	025.0000	0103.3	119.6	39.06	
269.0	007.3368	0090.3	028.2	106.6	025.0000	0103.3	119.2	39.12	
270.0	007.5950	0090.3	028.4	106.4	025.0000	0103.3	118.9	39.18	
271.0	007.8356	0090.3	028.6	106.2	025.0000	0103.3	118.5	39.24	

**MUNN-REESE, INC.**

Broadcast Engineering Consultants

COLDWATER, MI 49036

# Exhibit(s) 18.3

## Contour Protection Studies Toward WSCF-FM - Vero Beach, FL

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
272.0	008.0799	0090.3	028.8	106.0	025.0000	0103.3	118.2	39.30
273.0	008.3280	0090.3	029.0	105.8	025.0000	0103.3	117.9	39.35
274.0	008.5798	0090.3	029.2	105.6	025.0000	0103.3	117.6	39.40
275.0	008.8354	0090.3	029.4	105.4	025.0000	0103.4	117.3	39.46
276.0	009.0947	0090.3	029.6	105.1	025.0000	0103.4	117.0	39.51
277.0	009.3578	0090.3	029.8	104.9	025.0000	0103.5	116.7	39.56
278.0	009.6246	0090.3	030.0	104.7	025.0000	0103.5	116.5	39.61
279.0	009.8952	0090.3	030.2	104.4	025.0000	0103.6	116.2	39.66
280.0	010.1696	0090.3	030.4	104.2	025.0000	0103.6	116.0	39.70
281.0	010.3714	0090.3	030.5	103.9	025.0000	0103.8	115.8	39.73
282.0	010.5753	0090.3	030.7	103.6	025.0000	0103.9	115.6	39.77
283.0	010.7811	0090.3	030.8	103.4	025.0000	0104.1	115.5	39.80
284.0	010.9889	0090.3	031.0	103.1	025.0000	0104.2	115.3	39.83
285.0	011.1988	0090.3	031.1	102.8	025.0000	0104.3	115.2	39.86
286.0	011.4105	0090.3	031.2	102.6	025.0000	0104.5	115.1	39.89
287.0	011.6243	0090.4	031.4	102.3	025.0000	0104.7	115.0	39.91
288.0	011.8401	0090.3	031.5	102.0	025.0000	0104.8	114.9	39.93
289.0	012.0578	0090.4	031.7	101.7	025.0000	0105.0	114.8	39.95
290.0	012.2775	0090.4	031.8	101.4	025.0000	0105.2	114.7	39.97
291.0	012.4159	0090.5	031.9	101.2	025.0000	0105.4	114.7	39.98
292.0	012.5550	0090.5	032.0	100.9	025.0000	0105.6	114.7	39.99
293.0	012.6949	0090.6	032.1	100.6	025.0000	0105.7	114.7	39.99
294.0	012.8355	0090.7	032.2	100.3	025.0000	0105.7	114.7	39.99
295.0	012.9770	0090.8	032.3	100.0	025.0000	0105.7	114.7	39.98
296.0	013.1192	0090.9	032.4	099.7	025.0000	0105.7	114.8	39.97
297.0	013.2622	0090.9	032.5	099.5	025.0000	0105.6	114.9	39.96
298.0	013.4060	0090.9	032.6	099.2	025.0000	0105.6	115.0	39.94
299.0	013.5505	0091.0	032.7	098.9	025.0000	0105.5	115.1	39.92
300.0	013.6958	0091.0	032.8	098.6	025.0000	0105.4	115.2	39.90
301.0	013.7541	0091.0	032.8	098.3	025.0000	0105.2	115.3	39.86
302.0	013.8126	0091.1	032.9	098.1	025.0000	0104.9	115.5	39.82
303.0	013.8712	0091.2	032.9	097.8	025.0000	0104.7	115.7	39.78
304.0	013.9299	0091.3	032.9	097.5	025.0000	0104.6	115.9	39.74
305.0	013.9887	0091.3	033.0	097.3	025.0000	0104.4	116.1	39.70
306.0	014.0477	0091.4	033.0	097.0	025.0000	0104.3	116.4	39.65
307.0	014.1068	0091.4	033.1	096.7	025.0000	0104.2	116.6	39.60
308.0	014.1660	0091.3	033.1	096.5	025.0000	0104.0	116.9	39.55
309.0	014.2253	0091.3	033.1	096.2	025.0000	0103.9	117.2	39.50
310.0	014.2848	0091.3	033.1	096.0	025.0000	0103.8	117.4	39.45
311.0	014.3444	0091.2	033.2	095.8	025.0000	0103.6	117.7	39.39
312.0	014.4041	0091.3	033.2	095.5	025.0000	0103.5	118.0	39.33
313.0	014.4639	0091.3	033.2	095.3	025.0000	0103.3	118.4	39.27
314.0	014.5239	0091.2	033.3	095.1	025.0000	0103.2	118.7	39.21
315.0	014.5840	0091.2	033.3	094.8	025.0000	0103.0	119.0	39.15
316.0	014.6442	0091.3	033.3	094.6	025.0000	0102.9	119.4	39.08
317.0	014.7045	0091.3	033.4	094.4	025.0000	0102.8	119.7	39.02
318.0	014.7649	0091.3	033.4	094.2	025.0000	0102.7	120.1	38.95

## Exhibit(s) 18.4

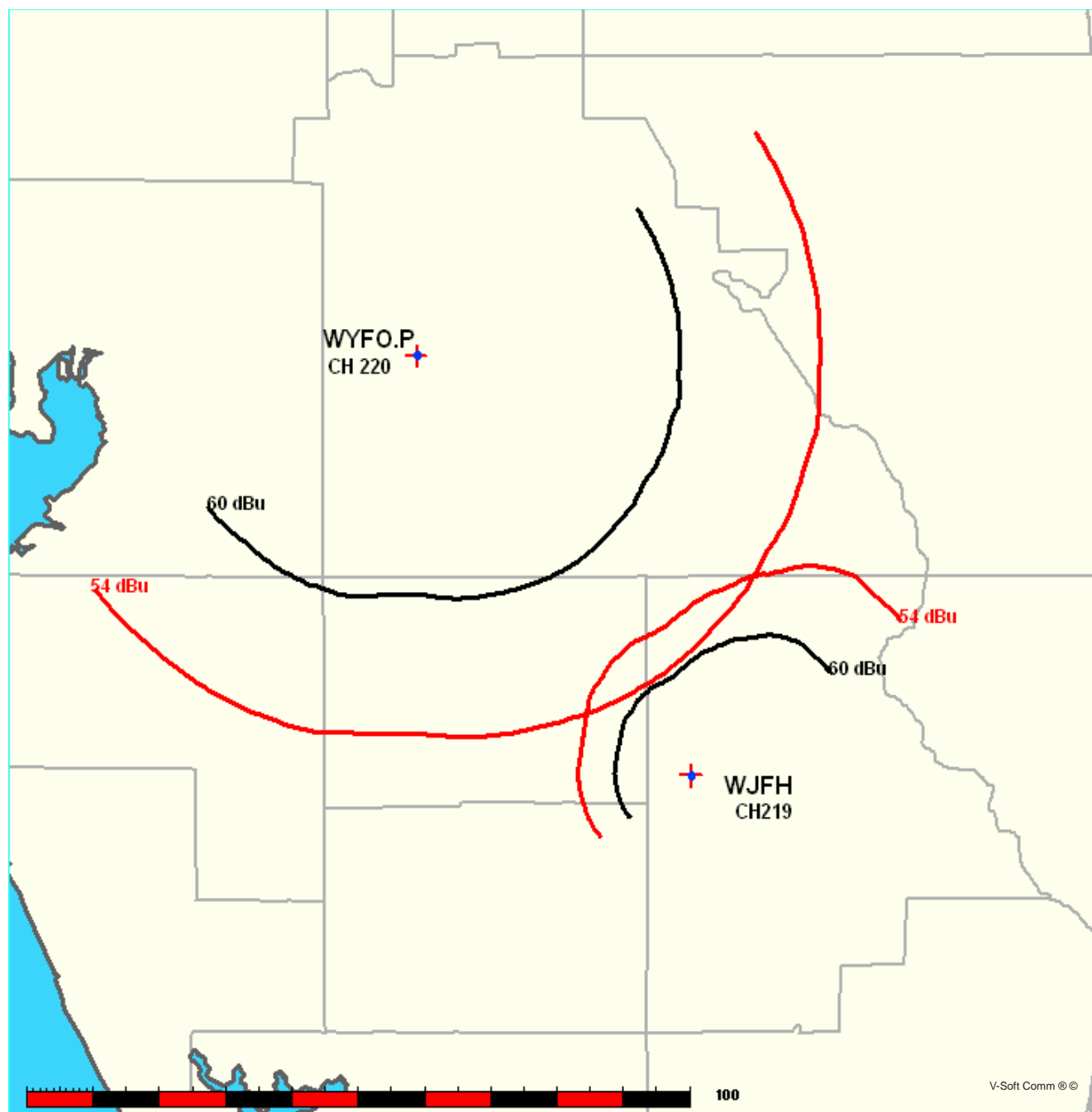
### Contour Protection Studies Toward WJFH(FM) - Sebring, FL

Bible Broadcasting Network, Inc.

FMCommander Single Allocation Study - 12-13-2013 - USGS 03 SEC  
WYFO.P's Overlaps (In= 15.32 km, Out= 1.24 km)

WYFO.P CH 220 C3 DA  
Lat= 27 56 35.0, Lng= 81 54 45.0  
25.0 kW 97.4 M HAAT, 138 M COR  
Prot.= 60 dBu, Intef.= 54 dBu

WJFH CH 219 A DA BLED20131121AVS  
Lat= 27 22 52.0, Lng= 81 29 28.0  
2.0 kW 137.1 M HAAT, 165.5 M COR  
Prot.= 60 dBu, Intef.= 54 dBu



# Exhibit(s) 18.4

## Contour Protection Studies Toward WJFH(FM) - Sebring, FL

12-13-2013

Terrain Data: USGS 03 SEC

FMOver Analysis

WYFO.P

WJFH BLED20131121AVS

Channel = 220C3

Max ERP = 25 kW

RCAMSL = 138 M

N. Lat. 27 56 35.0

W. Lng. 81 54 45.0

Protected

60 dBu

Channel = 219A

Max ERP = 2 kW

RCAMSL = 165.5 M

N. Lat. 27 22 52.0

W. Lng. 81 29 28.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
103.0	025.0000	0104.2	039.8	357.1	000.3995	0123.4	053.5	39.94	
104.0	025.0000	0103.7	039.7	356.8	000.3950	0123.2	052.9	40.13	
105.0	025.0000	0103.4	039.6	356.6	000.3909	0122.9	052.3	40.33	
106.0	025.0000	0103.3	039.6	356.3	000.3868	0122.8	051.6	40.52	
107.0	025.0000	0103.3	039.6	356.0	000.3828	0122.6	051.0	40.72	
108.0	025.0000	0103.4	039.6	355.7	000.3787	0122.5	050.3	40.92	
109.0	025.0000	0103.5	039.6	355.4	000.3745	0122.4	049.7	41.12	
110.0	025.0000	0103.6	039.7	355.1	000.3700	0122.3	049.0	41.31	
111.0	025.0000	0103.7	039.7	354.8	000.3651	0122.2	048.4	41.49	
112.0	025.0000	0103.7	039.7	354.4	000.3598	0122.2	047.8	41.67	
113.0	025.0000	0103.6	039.7	354.0	000.3538	0122.0	047.2	41.82	
114.0	025.0000	0103.4	039.6	353.5	000.3475	0122.0	046.6	41.97	
115.0	025.0000	0103.3	039.6	353.1	000.3409	0121.8	046.0	42.11	
116.0	025.0000	0102.8	039.5	352.5	000.3334	0121.5	045.5	42.22	
117.0	025.0000	0102.2	039.4	351.9	000.3252	0121.4	045.0	42.31	
118.0	025.0000	0101.3	039.3	351.3	000.3163	0121.2	044.5	42.37	
119.0	025.0000	0100.6	039.2	350.6	000.3075	0121.1	044.0	42.44	
120.0	025.0000	0100.5	039.2	350.0	000.2998	0121.1	043.5	42.55	
121.0	025.0000	0100.9	039.2	349.5	000.2963	0121.2	042.9	42.74	
122.0	025.0000	0101.6	039.3	349.0	000.2929	0121.2	042.4	42.93	
123.0	025.0000	0102.0	039.4	348.4	000.2892	0121.5	041.8	43.12	
124.0	025.0000	0102.3	039.5	347.8	000.2852	0121.8	041.3	43.30	
125.0	025.0000	0102.6	039.5	347.1	000.2810	0121.9	040.8	43.47	
126.0	025.0000	0102.6	039.5	346.4	000.2764	0121.9	040.4	43.59	
127.0	025.0000	0102.5	039.5	345.6	000.2716	0121.9	039.9	43.71	
128.0	025.0000	0102.4	039.5	344.8	000.2666	0122.2	039.5	43.82	
129.0	025.0000	0102.2	039.4	344.0	000.2615	0122.6	039.1	43.93	
130.0	025.0000	0101.9	039.4	343.1	000.2562	0122.9	038.8	44.01	
131.0	025.0000	0101.6	039.3	342.2	000.2508	0123.3	038.5	44.09	
132.0	025.0000	0101.5	039.3	341.3	000.2455	0124.4	038.2	44.22	
133.0	025.0000	0101.4	039.3	340.3	000.2401	0126.2	037.8	44.37	
134.0	025.0000	0101.5	039.3	339.4	000.2352	0127.8	037.5	44.52	
135.0	025.0000	0101.6	039.3	338.5	000.2305	0128.8	037.2	44.63	
136.0	025.0000	0101.6	039.3	337.5	000.2257	0130.2	037.0	44.75	

**MUNN-REESE, INC.**

Broadcast Engineering Consultants

COLDWATER, MI 49036

# Exhibit(s) 18.4

## Contour Protection Studies Toward WJFH(FM) - Sebring, FL

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
137.0	025.0000	0101.7	039.4	336.5	000.2210	0131.0	036.7	44.82
138.0	025.0000	0101.6	039.4	335.5	000.2161	0131.7	036.5	44.86
139.0	025.0000	0101.5	039.3	334.4	000.2112	0132.3	036.3	44.88
140.0	025.0000	0101.3	039.3	333.4	000.2062	0132.8	036.2	44.87
141.0	025.0000	0101.0	039.2	332.3	000.2012	0133.4	036.1	44.84
142.0	025.0000	0100.6	039.2	331.2	000.1963	0133.8	036.1	44.79
143.0	025.0000	0100.2	039.1	330.1	000.1914	0134.3	036.0	44.72
144.0	025.0000	0099.8	039.0	329.0	000.1879	0135.1	036.0	44.69
145.0	025.0000	0099.5	039.0	327.9	000.1846	0135.4	036.0	44.63
146.0	025.0000	0099.0	038.9	326.8	000.1813	0135.8	036.1	44.55
147.0	025.0000	0098.6	038.8	325.8	000.1781	0136.4	036.2	44.47
148.0	025.0000	0098.2	038.8	324.7	000.1749	0136.7	036.3	44.36
149.0	025.0000	0097.9	038.7	323.6	000.1718	0137.0	036.4	44.25
150.0	025.0000	0097.5	038.7	322.6	000.1688	0137.1	036.5	44.11
151.0	025.0000	0097.1	038.6	321.6	000.1658	0137.4	036.7	43.98
152.0	025.0000	0096.8	038.5	320.6	000.1629	0137.6	036.8	43.83
153.0	025.0000	0096.3	038.4	319.6	000.1600	0137.3	037.1	43.62
154.0	025.0000	0095.7	038.4	318.6	000.1569	0136.8	037.3	43.38
155.0	025.0000	0095.0	038.2	317.7	000.1540	0136.5	037.7	43.13
156.0	025.0000	0094.2	038.1	316.8	000.1513	0136.3	038.0	42.88
157.0	025.0000	0093.7	038.0	315.9	000.1486	0136.2	038.3	42.65
158.0	025.0000	0093.3	037.9	315.0	000.1459	0136.1	038.6	42.42
159.0	025.0000	0092.8	037.8	314.2	000.1455	0136.1	039.0	42.24
160.0	025.0000	0092.2	037.7	313.4	000.1451	0136.1	039.4	42.06
161.0	025.0000	0091.5	037.6	312.6	000.1448	0136.1	039.8	41.86
162.0	025.0000	0091.0	037.5	311.9	000.1445	0136.2	040.2	41.67
163.0	025.0000	0090.5	037.4	311.2	000.1441	0136.3	040.6	41.48
164.0	025.0000	0090.2	037.4	310.4	000.1438	0136.5	041.0	41.30
165.0	025.0000	0089.8	037.3	309.7	000.1428	0136.5	041.4	41.08
166.0	025.0000	0089.5	037.2	309.1	000.1407	0136.7	041.9	40.83
167.0	025.0000	0089.1	037.2	308.4	000.1387	0136.7	042.3	40.57
168.0	025.0000	0088.6	037.1	307.8	000.1368	0136.9	042.8	40.31
169.0	025.0000	0088.4	037.0	307.2	000.1349	0137.0	043.3	40.06
170.0	025.0000	0087.9	036.9	306.7	000.1332	0137.2	043.8	39.80
171.0	025.0000	0087.3	036.8	306.2	000.1317	0137.4	044.3	39.53
172.0	025.0000	0086.7	036.7	305.7	000.1302	0137.5	044.8	39.26
173.0	025.0000	0086.0	036.6	305.3	000.1289	0137.5	045.4	38.99
174.0	025.0000	0085.4	036.5	304.9	000.1276	0137.5	045.9	38.72
175.0	025.0000	0084.7	036.3	304.5	000.1265	0137.5	046.5	38.45
176.0	025.0000	0083.8	036.2	304.2	000.1255	0137.5	047.1	38.17
177.0	025.0000	0083.1	036.0	303.9	000.1246	0137.4	047.7	37.90
178.0	025.0000	0082.6	035.9	303.5	000.1235	0137.4	048.3	37.64
179.0	025.0000	0082.3	035.8	303.1	000.1225	0137.2	048.8	37.38
180.0	025.0000	0082.1	035.8	302.8	000.1213	0137.2	049.4	37.13
181.0	025.0000	0082.4	035.9	302.3	000.1201	0137.1	049.9	36.89
182.0	025.0000	0082.5	035.9	302.0	000.1190	0137.0	050.4	36.63
183.0	025.0000	0082.6	035.9	301.6	000.1179	0136.9	050.9	36.38

**MUNN-REESE, INC.**

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COLDWATER, MI 49036

# Exhibit(s) 18.4

## Contour Protection Studies Toward WJFH(FM) - Sebring, FL

12-13-2013

Terrain Data: USGS 03 SEC

FMOver Analysis

WJFH BLED20131121AVS

WYFO.P

Channel = 219A

Max ERP = 2 kW

RCAMSL = 165.5 M

N. Lat. 27 22 52.0

W. Lng. 81 29 28.0

Protected

60 dBu

Channel = 220C3

Max ERP = 25 kW

RCAMSL = 138 M

N. Lat. 27 56 35.0

W. Lng. 81 54 45.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
282.0	000.0912	0136.6	011.7	153.3	025.0000	0096.0	067.2	51.53	
283.0	000.0919	0136.5	011.7	153.2	025.0000	0096.1	067.0	51.58	
284.0	000.0926	0136.3	011.7	153.1	025.0000	0096.2	066.8	51.64	
285.0	000.0933	0136.3	011.7	153.0	025.0000	0096.2	066.7	51.69	
286.0	000.0940	0136.3	011.8	152.9	025.0000	0096.3	066.5	51.75	
287.0	000.0947	0136.4	011.8	152.8	025.0000	0096.4	066.3	51.80	
288.0	000.0954	0136.4	011.8	152.7	025.0000	0096.4	066.2	51.85	
289.0	000.0961	0136.4	011.8	152.6	025.0000	0096.5	066.0	51.90	
290.0	000.0968	0136.4	011.9	152.5	025.0000	0096.6	065.9	51.96	
291.0	000.0984	0136.3	011.9	152.4	025.0000	0096.6	065.7	52.01	
292.0	000.1000	0136.3	011.9	152.2	025.0000	0096.7	065.5	52.07	
293.0	000.1016	0136.3	012.0	152.1	025.0000	0096.8	065.3	52.12	
294.0	000.1032	0136.4	012.0	152.0	025.0000	0096.8	065.2	52.18	
295.0	000.1049	0136.4	012.1	151.9	025.0000	0096.8	065.0	52.23	
296.0	000.1065	0136.4	012.1	151.8	025.0000	0096.9	064.8	52.28	
297.0	000.1082	0136.4	012.2	151.6	025.0000	0096.9	064.7	52.33	
298.0	000.1099	0136.5	012.2	151.5	025.0000	0096.9	064.5	52.38	
299.0	000.1116	0136.6	012.3	151.4	025.0000	0096.9	064.4	52.43	
300.0	000.1133	0136.8	012.3	151.2	025.0000	0097.0	064.2	52.48	
301.0	000.1162	0136.8	012.4	151.1	025.0000	0097.1	064.0	52.54	
302.0	000.1191	0137.0	012.5	151.0	025.0000	0097.2	063.8	52.60	
303.0	000.1220	0137.2	012.6	150.8	025.0000	0097.2	063.7	52.66	
304.0	000.1250	0137.5	012.7	150.7	025.0000	0097.3	063.5	52.72	
305.0	000.1280	0137.5	012.7	150.5	025.0000	0097.3	063.3	52.78	
306.0	000.1311	0137.4	012.8	150.4	025.0000	0097.4	063.2	52.83	
307.0	000.1342	0137.1	012.9	150.2	025.0000	0097.4	063.0	52.88	
308.0	000.1373	0136.8	012.9	150.1	025.0000	0097.4	062.9	52.93	
309.0	000.1405	0136.7	013.0	149.9	025.0000	0097.5	062.7	52.97	
310.0	000.1436	0136.5	013.1	149.7	025.0000	0097.6	062.6	53.02	
311.0	000.1441	0136.4	013.1	149.5	025.0000	0097.6	062.5	53.05	
312.0	000.1445	0136.2	013.1	149.3	025.0000	0097.7	062.4	53.08	
313.0	000.1449	0136.1	013.1	149.1	025.0000	0097.8	062.4	53.11	
314.0	000.1454	0136.1	013.1	148.9	025.0000	0097.9	062.3	53.14	

**MUNN-REESE, INC.**

Broadcast Engineering Consultants

COLDWATER, MI 49036



## Exhibit(s) 18.4

### Contour Protection Studies Toward WJFH(FM) - Sebring, FL

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
315.0	000.1458	0136.1	013.1	148.7	025.0000	0098.0	062.2	53.17
316.0	000.1488	0136.2	013.2	148.5	025.0000	0098.0	062.1	53.21
317.0	000.1519	0136.3	013.2	148.3	025.0000	0098.1	062.0	53.25
318.0	000.1550	0136.6	013.3	148.1	025.0000	0098.1	061.9	53.30
319.0	000.1581	0136.9	013.4	147.9	025.0000	0098.2	061.7	53.34
320.0	000.1613	0137.5	013.5	147.7	025.0000	0098.2	061.6	53.39
321.0	000.1642	0137.6	013.5	147.5	025.0000	0098.3	061.5	53.43
322.0	000.1670	0137.3	013.6	147.3	025.0000	0098.4	061.5	53.45
323.0	000.1699	0137.1	013.6	147.1	025.0000	0098.5	061.4	53.48
324.0	000.1729	0136.9	013.7	146.9	025.0000	0098.6	061.3	53.52
325.0	000.1758	0136.7	013.7	146.6	025.0000	0098.8	061.3	53.54
326.0	000.1788	0136.3	013.8	146.4	025.0000	0098.9	061.2	53.56
327.0	000.1818	0135.7	013.8	146.2	025.0000	0099.0	061.2	53.58
328.0	000.1848	0135.4	013.8	146.0	025.0000	0099.0	061.2	53.60
329.0	000.1879	0135.1	013.9	145.7	025.0000	0099.2	061.1	53.61
330.0	000.1910	0134.4	013.9	145.5	025.0000	0099.3	061.1	53.62
331.0	000.1954	0133.9	014.0	145.3	025.0000	0099.4	061.1	53.64
332.0	000.2000	0133.5	014.0	145.1	025.0000	0099.4	061.1	53.66
333.0	000.2045	0133.0	014.1	144.8	025.0000	0099.5	061.0	53.67
334.0	000.2092	0132.5	014.1	144.6	025.0000	0099.6	061.0	53.68
335.0	000.2139	0131.9	014.2	144.3	025.0000	0099.7	061.0	53.68
336.0	000.2186	0131.3	014.2	144.1	025.0000	0099.7	061.0	53.69
337.0	000.2234	0130.6	014.3	143.9	025.0000	0099.8	061.0	53.69
338.0	000.2282	0129.6	014.3	143.6	025.0000	0099.9	061.1	53.68
339.0	000.2331	0128.3	014.3	143.4	025.0000	0100.0	061.1	53.67
340.0	000.2380	0126.8	014.3	143.2	025.0000	0100.1	061.2	53.65
341.0	000.2439	0124.9	014.3	143.0	025.0000	0100.2	061.3	53.62
342.0	000.2498	0123.4	014.3	142.8	025.0000	0100.3	061.4	53.60
343.0	000.2558	0122.9	014.3	142.5	025.0000	0100.4	061.4	53.60
344.0	000.2618	0122.6	014.4	142.3	025.0000	0100.5	061.4	53.60
345.0	000.2679	0122.1	014.4	142.0	025.0000	0100.6	061.5	53.59
346.0	000.2741	0121.9	014.5	141.8	025.0000	0100.7	061.5	53.58
347.0	000.2804	0121.8	014.6	141.5	025.0000	0100.8	061.5	53.58
348.0	000.2867	0121.7	014.7	141.3	025.0000	0100.9	061.6	53.57
349.0	000.2931	0121.2	014.7	141.1	025.0000	0101.0	061.6	53.56
350.0	000.2995	0121.1	014.8	140.8	025.0000	0101.0	061.7	53.54
351.0	000.3127	0121.2	015.0	140.5	025.0000	0101.1	061.7	53.56
352.0	000.3261	0121.4	015.2	140.2	025.0000	0101.2	061.6	53.57
353.0	000.3398	0121.8	015.4	139.9	025.0000	0101.3	061.6	53.58
354.0	000.3538	0122.0	015.6	139.6	025.0000	0101.3	061.6	53.59
355.0	000.3681	0122.3	015.8	139.3	025.0000	0101.4	061.6	53.60
356.0	000.3826	0122.6	016.0	139.0	025.0000	0101.5	061.6	53.60
357.0	000.3975	0123.3	016.2	138.7	025.0000	0101.6	061.6	53.61
358.0	000.4126	0124.2	016.4	138.3	025.0000	0101.6	061.6	53.61
359.0	000.4280	0125.0	016.7	138.0	025.0000	0101.7	061.6	53.61
000.0	000.4437	0125.9	016.9	137.6	025.0000	0101.7	061.6	53.61

## Exhibit(s) 18.5

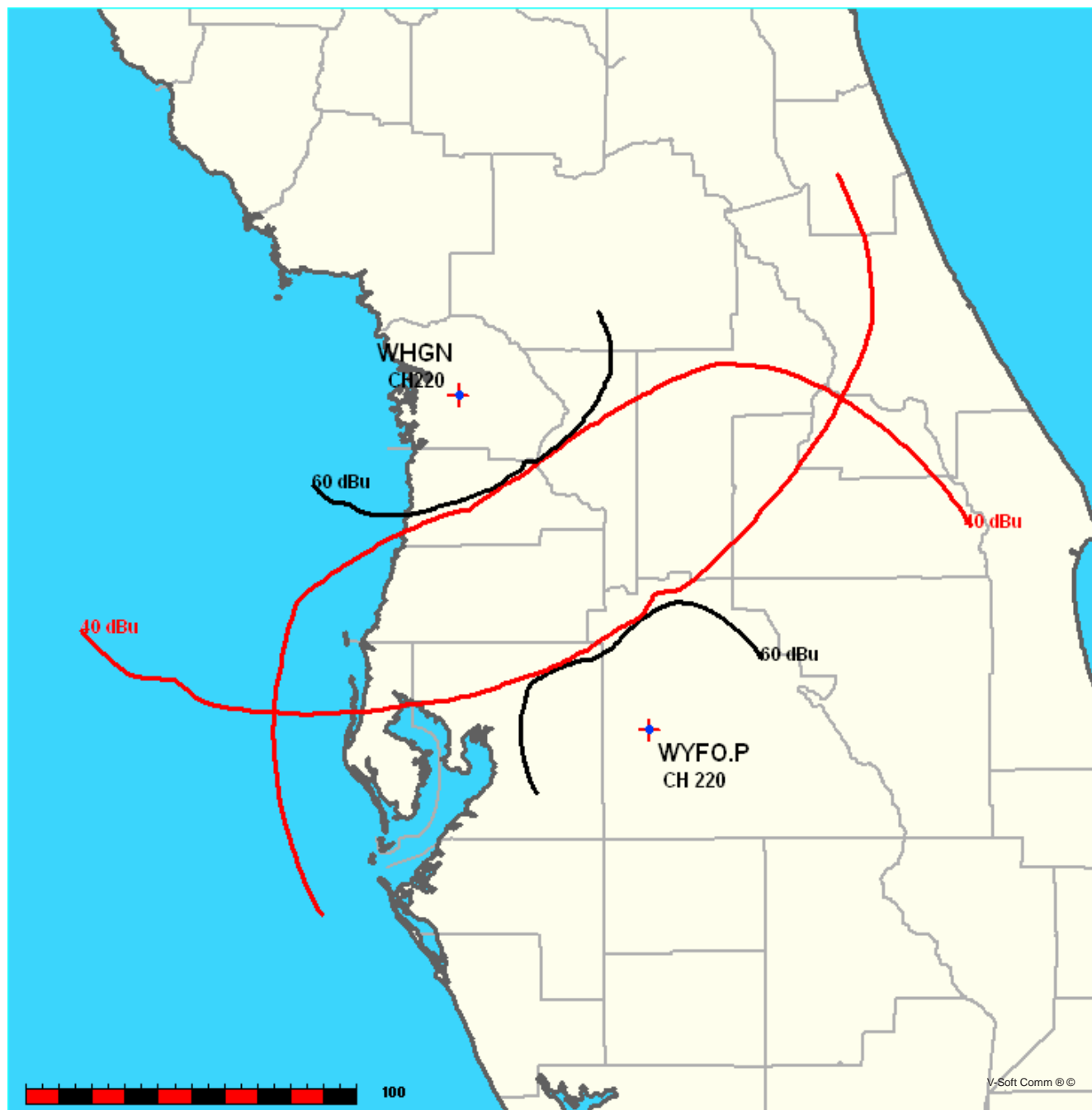
### Contour Protection Studies Toward WHGN(FM) - Crystal River, FL

Bible Broadcasting Network, Inc.

FMCommander Single Allocation Study - 12-13-2013 - USGS 03 SEC  
WYFO.P's Overlaps (In= 3.68 km, Out= 1.34 km)

WYFO.P CH 220 C3 DA  
Lat= 27 56 35.0, Lng= 81 54 45.0  
25.0 kW 97.4 M HAAT, 138 M COR  
Prot.= 60 dBu, Intef.= 40 dBu

WHGN CH 220 C2 DA BLED20020207AAS  
Lat= 28 50 29.0, Lng= 82 30 21.0  
41.0 kW 165 M HAAT, 165 M COR  
Prot.= 60 dBu, Intef.= 40 dBu



**MUNN-REESE, INC.**

Broadcast Engineering Consultants  
COLDWATER, MI 49036

# Exhibit(s) 18.5

## Contour Protection Studies Toward WHGN(FM) - Crystal River, FL

12-13-2013

Terrain Data: USGS 03 SEC

FMOver Analysis

WYFO.P

WHGN BLED20020207AAS

Channel = 220C3  
Max ERP = 25 kW  
RCAMSL = 138 M  
N. Lat. 27 56 35.0  
W. Lng. 81 54 45.0  
Protected  
60 dBu

Channel = 220C2  
Max ERP = 41 kW  
RCAMSL = 165 M  
N. Lat. 28 50 29.0  
W. Lng. 82 30 21.0  
Interfering  
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
287.0	025.0000	0098.3	038.8	166.6	003.8191	0146.7	091.1	38.82	
288.0	025.0000	0098.2	038.8	166.4	003.8092	0146.7	090.5	38.97	
289.0	025.0000	0097.8	038.7	166.1	003.7981	0146.8	089.9	39.12	
290.0	025.0000	0097.1	038.6	165.8	003.7855	0146.8	089.4	39.25	
291.0	023.9610	0096.7	038.2	165.3	003.7658	0146.9	089.1	39.32	
292.0	022.9441	0096.3	037.8	164.9	003.7462	0147.1	088.8	39.39	
293.0	021.9492	0095.7	037.3	164.4	003.7258	0147.2	088.6	39.45	
294.0	020.9764	0095.2	036.9	163.9	003.7053	0147.3	088.4	39.49	
295.0	020.0256	0094.7	036.4	163.4	003.6845	0147.9	088.2	39.55	
296.0	019.0969	0094.4	036.0	162.9	003.6644	0148.3	088.0	39.59	
297.0	018.1902	0094.2	035.6	162.4	003.6445	0148.8	087.8	39.64	
298.0	017.3056	0094.0	035.2	162.0	003.6246	0149.0	087.7	39.66	
299.0	016.4430	0093.8	034.7	161.5	003.6043	0148.9	087.6	39.67	
300.0	015.6025	0093.5	034.2	161.0	003.5840	0149.0	087.5	39.66	
301.0	014.9576	0093.3	033.9	160.5	003.5653	0149.1	087.4	39.67	
302.0	014.3262	0093.1	033.5	160.1	003.5465	0149.2	087.4	39.68	
303.0	013.7085	0093.0	033.1	159.6	003.5439	0149.2	087.3	39.69	
304.0	013.1044	0092.9	032.8	159.2	003.5439	0149.1	087.3	39.70	
305.0	012.5139	0092.9	032.4	158.7	003.5439	0149.0	087.2	39.71	
306.0	011.9370	0092.9	032.0	158.3	003.5439	0148.8	087.2	39.69	
307.0	011.3738	0093.0	031.7	157.8	003.5439	0148.4	087.2	39.67	
308.0	010.8241	0093.0	031.3	157.4	003.5439	0147.8	087.3	39.64	
309.0	010.2881	0093.0	030.9	157.0	003.5439	0147.2	087.3	39.59	
310.0	009.7656	0092.9	030.5	156.6	003.5439	0146.6	087.4	39.54	
311.0	009.3789	0092.8	030.2	156.2	003.5439	0146.0	087.5	39.50	
312.0	009.0000	0092.6	029.9	155.8	003.5439	0145.4	087.6	39.46	
313.0	008.6289	0092.2	029.6	155.4	003.5439	0145.1	087.7	39.41	
314.0	008.2656	0091.8	029.2	155.0	003.5439	0144.9	087.8	39.36	
315.0	007.9102	0091.4	028.9	154.6	003.5439	0144.7	088.0	39.31	
316.0	007.5625	0091.0	028.5	154.2	003.5439	0144.8	088.1	39.26	
317.0	007.2227	0090.6	028.1	153.8	003.5439	0144.8	088.3	39.21	
318.0	006.8906	0090.1	027.8	153.4	003.5439	0144.7	088.5	39.15	
319.0	006.5664	0089.6	027.4	153.1	003.5439	0144.7	088.8	39.08	
320.0	006.2500	0088.9	027.0	152.7	003.5439	0144.4	089.0	38.98	

# Exhibit(s) 18.5

## Contour Protection Studies Toward WHGN(FM) - Crystal River, FL

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
321.0	006.2500	0087.9	026.9	152.4	003.5439	0144.0	089.1	38.96
322.0	006.2500	0087.3	026.8	152.1	003.5439	0143.7	089.1	38.94
323.0	006.2500	0086.9	026.7	151.8	003.5439	0143.4	089.0	38.94
324.0	006.2500	0086.7	026.7	151.5	003.5439	0143.1	089.0	38.94
325.0	006.2500	0086.4	026.6	151.2	003.5439	0142.8	089.0	38.93
326.0	006.2500	0086.2	026.6	150.9	003.5439	0142.5	089.0	38.92
327.0	006.2500	0086.4	026.7	150.6	003.5439	0142.1	088.9	38.93
328.0	006.2500	0086.7	026.7	150.3	003.5439	0141.8	088.8	38.93
329.0	006.2500	0086.8	026.7	150.0	003.5441	0141.6	088.8	38.93
330.0	006.2500	0086.5	026.7	149.7	003.5564	0141.3	088.9	38.92
331.0	006.3127	0085.4	026.6	149.4	003.5687	0141.0	088.9	38.90
332.0	006.3756	0084.4	026.5	149.1	003.5808	0140.6	089.1	38.87
333.0	006.4389	0083.9	026.5	148.8	003.5931	0140.2	089.1	38.85
334.0	006.5025	0083.8	026.5	148.5	003.6054	0139.8	089.1	38.85
335.0	006.5664	0084.2	026.6	148.2	003.6180	0139.4	089.0	38.87
336.0	006.6306	0085.5	026.9	147.9	003.6312	0139.0	088.8	38.92
337.0	006.6952	0087.1	027.2	147.6	003.6448	0138.4	088.6	38.98
338.0	006.7600	0088.3	027.4	147.2	003.6586	0137.9	088.5	39.02
339.0	006.8252	0089.1	027.6	146.9	003.6722	0137.4	088.4	39.03
340.0	006.8906	0089.8	027.7	146.6	003.6859	0136.8	088.3	39.04
341.0	007.0623	0090.7	028.0	146.2	003.7006	0136.2	088.2	39.08
342.0	007.2361	0092.0	028.4	145.9	003.7160	0135.8	088.0	39.14
343.0	007.4120	0093.3	028.7	145.5	003.7318	0135.4	087.8	39.20
344.0	007.5900	0094.7	029.1	145.1	003.7481	0135.1	087.6	39.26
345.0	007.7702	0096.3	029.5	144.7	003.7650	0135.2	087.4	39.34
346.0	007.9524	0097.5	029.8	144.3	003.7816	0135.4	087.3	39.40
347.0	008.1368	0098.5	030.1	143.9	003.7984	0135.8	087.2	39.46
348.0	008.3232	0099.3	030.4	143.5	003.8150	0136.4	087.1	39.52
349.0	008.5118	0099.7	030.6	143.1	003.8310	0136.9	087.2	39.55
350.0	008.7025	0099.9	030.8	142.8	003.8470	0137.5	087.2	39.58
351.0	009.1355	0100.1	031.2	142.3	003.8654	0137.9	087.1	39.64
352.0	009.5790	0100.3	031.6	141.9	003.8842	0137.9	087.1	39.68
353.0	010.0331	0100.4	031.9	141.4	003.9031	0137.9	087.0	39.72
354.0	010.4976	0100.4	032.3	141.0	003.9218	0138.0	087.0	39.74
355.0	010.9727	0100.3	032.6	140.6	003.9406	0138.0	087.0	39.76
356.0	011.4582	0100.0	032.9	140.2	003.9587	0138.1	087.1	39.75
357.0	011.9543	0099.9	033.2	139.7	003.9368	0138.0	087.2	39.70
358.0	012.4609	0099.9	033.6	139.3	003.8908	0137.9	087.3	39.62
359.0	012.9780	0099.9	033.9	138.9	003.8450	0137.9	087.4	39.53
000.0	013.5056	0100.0	034.2	138.4	003.7987	0138.0	087.6	39.44
001.0	014.2129	0100.2	034.6	137.9	003.7488	0137.9	087.7	39.36
002.0	014.9382	0100.3	035.1	137.5	003.7001	0137.9	087.8	39.26
003.0	015.6816	0100.3	035.4	137.0	003.6524	0137.4	087.9	39.14
004.0	016.4430	0100.4	035.8	136.6	003.6047	0137.2	088.1	39.02
005.0	017.2225	0100.5	036.2	136.1	003.5580	0137.0	088.3	38.90
006.0	018.0200	0100.7	036.6	135.6	003.5122	0136.8	088.6	38.76
007.0	018.8356	0100.9	037.0	135.2	003.4661	0136.9	088.8	38.64

# Exhibit(s) 18.5

## Contour Protection Studies Toward WHGN(FM) - Crystal River, FL

12-13-2013

Terrain Data: USGS 03 SEC

FMOver Analysis

WHGN BLED20020207AAS

WYFO.P

Channel = 220C2

Max ERP = 41 kW

RCAMSL = 165 M

N. Lat. 28 50 29.0

W. Lng. 82 30 21.0

Protected

60 dBu

Channel = 220C3

Max ERP = 25 kW

RCAMSL = 138 M

N. Lat. 27 56 35.0

W. Lng. 81 54 45.0

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
105.0	010.8954	0137.9	037.5	346.5	008.0473	0098.0	092.7	39.57	
106.0	010.4147	0137.9	037.1	346.1	007.9745	0097.6	092.3	39.61	
107.0	009.9448	0138.1	036.8	345.7	007.9020	0097.2	091.9	39.65	
108.0	009.4858	0138.1	036.4	345.3	007.8270	0096.8	091.6	39.68	
109.0	009.0376	0138.0	036.0	344.9	007.7487	0096.2	091.3	39.69	
110.0	008.6003	0137.6	035.6	344.4	007.6673	0095.4	091.0	39.67	
111.0	008.3542	0137.5	035.3	344.1	007.6027	0094.8	090.7	39.70	
112.0	008.1117	0137.9	035.1	343.7	007.5430	0094.3	090.3	39.74	
113.0	007.8728	0138.2	034.9	343.4	007.4816	0093.9	090.0	39.78	
114.0	007.6374	0138.5	034.7	343.0	007.4192	0093.4	089.6	39.81	
115.0	007.4056	0138.7	034.5	342.7	007.3548	0092.8	089.3	39.83	
116.0	007.1774	0138.4	034.2	342.3	007.2845	0092.3	089.1	39.82	
117.0	006.9527	0137.4	033.8	341.8	007.2082	0091.7	088.9	39.80	
118.0	006.7317	0136.3	033.4	341.4	007.1308	0091.1	088.8	39.76	
119.0	006.5142	0136.2	033.2	341.0	007.0619	0090.7	088.6	39.74	
120.0	006.3002	0136.2	032.9	340.6	006.9938	0090.3	088.4	39.73	
121.0	006.1659	0135.7	032.7	340.2	006.9282	0090.0	088.3	39.72	
122.0	006.0331	0135.1	032.4	339.8	006.8797	0089.7	088.1	39.72	
123.0	005.9017	0134.7	032.2	339.5	006.8548	0089.3	087.9	39.74	
124.0	005.7718	0134.5	032.0	339.1	006.8303	0089.1	087.8	39.75	
125.0	005.6433	0134.9	031.9	338.7	006.8076	0088.9	087.6	39.78	
126.0	005.5162	0134.7	031.7	338.4	006.7833	0088.6	087.4	39.79	
127.0	005.3906	0134.7	031.5	338.0	006.7591	0088.3	087.3	39.80	
128.0	005.2665	0134.6	031.3	337.6	006.7349	0088.1	087.2	39.80	
129.0	005.1438	0134.6	031.1	337.2	006.7110	0087.5	087.1	39.79	
130.0	005.0225	0134.8	031.0	336.9	006.6874	0086.9	087.0	39.77	
131.0	004.6840	0135.3	030.5	336.4	006.6584	0086.2	087.1	39.67	
132.0	004.3573	0135.4	030.0	336.0	006.6293	0085.5	087.4	39.56	
133.0	004.0424	0136.3	029.6	335.6	006.6021	0084.8	087.6	39.46	
134.0	003.7394	0136.8	029.1	335.1	006.5749	0084.4	087.8	39.35	
135.0	003.4481	0136.9	028.6	334.7	006.5477	0084.1	088.1	39.24	
136.0	003.5487	0137.0	028.8	334.4	006.5305	0084.0	087.8	39.31	
137.0	003.6507	0137.4	029.0	334.2	006.5132	0083.9	087.4	39.39	

# Exhibit(s) 18.5

## Contour Protection Studies Toward WHGN(FM) - Crystal River, FL

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
138.0	003.7542	0137.9	029.3	333.9	006.4956	0083.8	087.1	39.48
139.0	003.8592	0137.9	029.4	333.6	006.4767	0083.9	086.8	39.55
140.0	003.9656	0138.1	029.6	333.3	006.4576	0083.9	086.4	39.62
141.0	003.9223	0138.0	029.6	332.9	006.4356	0084.0	086.4	39.62
142.0	003.8793	0137.9	029.5	332.6	006.4137	0084.1	086.4	39.61
143.0	003.8366	0137.1	029.3	332.3	006.3915	0084.2	086.4	39.59
144.0	003.7940	0135.7	029.1	331.9	006.3691	0084.5	086.6	39.55
145.0	003.7518	0135.1	029.0	331.6	006.3475	0084.9	086.7	39.54
146.0	003.7097	0136.0	029.0	331.2	006.3265	0085.2	086.6	39.55
147.0	003.6679	0137.5	029.1	330.9	006.3057	0085.6	086.5	39.58
148.0	003.6263	0139.1	029.1	330.6	006.2848	0086.0	086.4	39.61
149.0	003.5850	0140.5	029.2	330.2	006.2637	0086.3	086.3	39.63
150.0	003.5439	0141.6	029.2	329.9	006.2500	0086.6	086.3	39.64
151.0	003.5439	0142.7	029.3	329.5	006.2500	0086.8	086.2	39.68
152.0	003.5439	0143.6	029.4	329.2	006.2500	0086.8	086.1	39.70
153.0	003.5439	0144.6	029.5	328.9	006.2500	0086.8	086.1	39.71
154.0	003.5439	0144.8	029.5	328.5	006.2500	0086.8	086.1	39.70
155.0	003.5439	0144.9	029.5	328.2	006.2500	0086.7	086.2	39.69
156.0	003.5439	0145.7	029.6	327.8	006.2500	0086.6	086.1	39.69
157.0	003.5439	0147.2	029.7	327.5	006.2500	0086.5	086.1	39.70
158.0	003.5439	0148.5	029.9	327.1	006.2500	0086.4	086.1	39.70
159.0	003.5439	0149.1	029.9	326.8	006.2500	0086.3	086.1	39.68
160.0	003.5439	0149.2	029.9	326.4	006.2500	0086.2	086.2	39.64
161.0	003.5850	0149.0	030.0	326.1	006.2500	0086.2	086.3	39.62
162.0	003.6263	0149.0	030.1	325.7	006.2500	0086.2	086.4	39.61
163.0	003.6679	0148.2	030.1	325.4	006.2500	0086.3	086.5	39.57
164.0	003.7097	0147.2	030.1	325.1	006.2500	0086.3	086.7	39.53
165.0	003.7518	0147.0	030.1	324.7	006.2500	0086.4	086.8	39.50
166.0	003.7940	0146.8	030.2	324.4	006.2500	0086.6	087.0	39.47
167.0	003.8366	0146.9	030.3	324.1	006.2500	0086.7	087.1	39.44
168.0	003.8793	0147.0	030.4	323.7	006.2500	0086.8	087.2	39.41
169.0	003.9223	0146.5	030.4	323.4	006.2500	0086.9	087.4	39.36
170.0	003.9656	0146.0	030.4	323.1	006.2500	0086.9	087.6	39.30
171.0	004.0656	0145.9	030.6	322.7	006.2500	0087.0	087.7	39.28
172.0	004.1670	0146.2	030.8	322.3	006.2500	0087.1	087.8	39.27
173.0	004.2695	0145.7	030.9	322.0	006.2500	0087.3	088.0	39.23
174.0	004.3734	0145.3	031.1	321.6	006.2500	0087.6	088.1	39.20
175.0	004.4784	0145.1	031.2	321.3	006.2500	0087.7	088.3	39.16
176.0	004.5848	0145.0	031.4	320.9	006.2500	0087.9	088.5	39.12
177.0	004.6923	0144.6	031.5	320.6	006.2500	0088.2	088.7	39.08
178.0	004.8011	0144.5	031.7	320.3	006.2500	0088.6	088.9	39.04
179.0	004.9112	0144.2	031.8	319.9	006.2754	0088.9	089.1	39.02
180.0	005.0225	0144.0	032.0	319.6	006.3810	0089.2	089.4	39.04
181.0	005.1438	0144.3	032.2	319.2	006.4963	0089.5	089.6	39.07
182.0	005.2665	0144.3	032.4	318.9	006.6070	0089.7	089.8	39.09
183.0	005.3906	0143.7	032.5	318.6	006.7086	0089.8	090.1	39.08
184.0	005.5162	0143.4	032.7	318.2	006.8124	0090.0	090.4	39.08

## Exhibit 18.6

### Tabulation of Proposed Directional Antenna Pattern

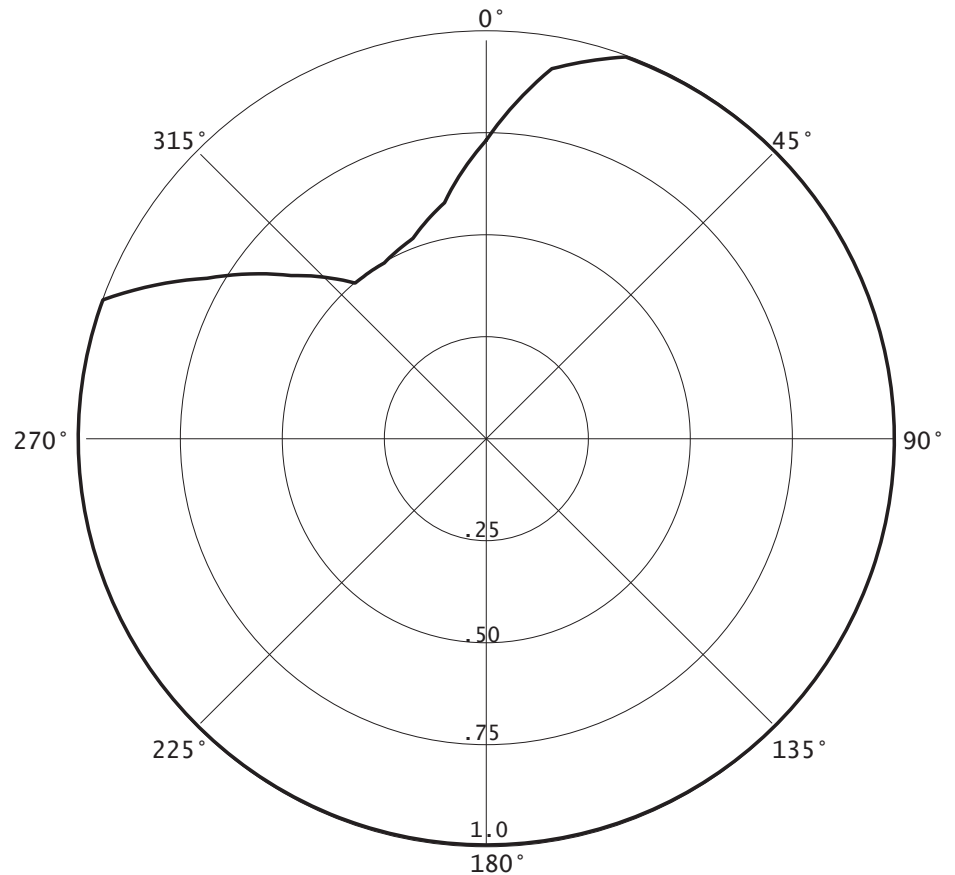
WYFO.P

12-13-2013

RMS(V)= .936

Graph is Relative Field

Azi	Field	dbk	kw
000	0.735	11.305	13.506
010	0.925	13.302	21.391
020	1.000	13.979	25.000
030	1.000	13.979	25.000
040	1.000	13.979	25.000
050	1.000	13.979	25.000
060	1.000	13.979	25.000
070	1.000	13.979	25.000
080	1.000	13.979	25.000
090	1.000	13.979	25.000
100	1.000	13.979	25.000
110	1.000	13.979	25.000
120	1.000	13.979	25.000
130	1.000	13.979	25.000
140	1.000	13.979	25.000
150	1.000	13.979	25.000
160	1.000	13.979	25.000
170	1.000	13.979	25.000
180	1.000	13.979	25.000
190	1.000	13.979	25.000
200	1.000	13.979	25.000
210	1.000	13.979	25.000
220	1.000	13.979	25.000
230	1.000	13.979	25.000
240	1.000	13.979	25.000
250	1.000	13.979	25.000
260	1.000	13.979	25.000
270	1.000	13.979	25.000
280	1.000	13.979	25.000
290	1.000	13.979	25.000
300	0.790	11.932	15.603
310	0.625	09.897	9.766
320	0.500	07.959	6.250
330	0.500	07.959	6.250
340	0.525	08.383	6.891
350	0.590	09.396	8.702



The antenna proposed in this application will be mounted in accordance with specific instructions provided by the antenna manufacturer. The antenna will be tested by the manufacturer using the type of mounting which will be employed in the field.

The directional antenna will be mounted on the tower which is of uniform cross section. No other antennas of any type are or will be mounted on the same tower level as the directional antenna.

No antenna is or will be mounted within any vertical or horizontal distance specified by the antenna manufacturer as being necessary for proper operation of the directional antenna. The antenna will be assembled under the supervision of a qualified engineer, who will provide the required certification. This statement will certify that the antenna has been installed pursuant to the manufacturer's instructions. Also upon completion of antenna construction, a statement from a licensed surveyor will be submitted with the application for license certifying the antenna has been installed in the proper orientation.

The directional antenna pattern will be produced by means of the antenna yagi element design or by means of parasitic elements, adjusted to produce the required pattern.

The antenna pattern will be measured by the manufacturer on the test range, and the measurement results will be supplied to the Commission at the time Form 302-FM is filed covering the construction.